MC 87-1-39 D(P)

PRELIMINARY REPORT
INDUSTRY SERIES

1987 Census of Manufactures

MC87-I-39D(P)
Issued June 1989

MISCELLANEOUS MANUFACTURES

Industries 3991, 3993, 3995, 3996, and 3999

INTRODUCTION

This report presents preliminary statistics from the 1987 Census of Manufactures for those establishments classified in the industries listed above. These data will be superseded by a more comprehensive final paperbound report. The method of data collection and use of administrative data are discussed in detail in the appendix.

All dollar figures included in this report are at prices current for the year specified and, therefore, unadjusted for changes in price levels. Consequently, when making comparisons to prior years, users should take into consideration the inflation that has occurred.

The definitions of these industries are the same as those used in the 1987 Standard Industrial Classification (SIC) Manual.[1]

INDUSTRY 3991, BROOMS AND BRUSHES

In the 1987 Census of Manufactures, Industry 3991, Brooms and Brushes, had employment of 12.1 thousand. The employment figure was 14 percent below the 14.1 thousand reported in 1982.

The total value of shipments for establishments classified in this industry was $974.7 million.

The cost of materials and services used by establishments in this industry amounted to $434.3 million in 1987. Data on specific materials consumed appear in table 3.

INDUSTRY 3993, SIGNS AND ADVERTISING SPECIALTIES

In the 1987 Census of Manufactures, Industry 3993, Signs and Advertising Specialties, had employment of 65.2 thousand. The employment figure was 24 percent above the 52.8 thousand reported in 1982. Compared with 1986, employment in 1987 increased 21 percent. The 1986 data are based on the Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses.

The total value of shipments for establishments classified in this industry was $4.2 billion.

The cost of materials and services used by establishments in this industry amounted to $1.8 billion in 1987. Data on specific materials consumed appear in table 3.

INDUSTRY 3995, BURIAL CASKETS

In the 1987 Census of Manufactures, Industry 3995, Burial Caskets, had employment of 8.7 thousand. The employment figure was 15 percent below the 10.3 thousand reported in 1982.

The total value of shipments for establishments classified in this industry was $837.8 million.

The cost of materials and services used by establishments in this industry amounted to $360.1 million in 1987. Data on specific materials consumed appear in table 3.

INDUSTRY 3996, HARD SURFACE FLOOR COVERINGS, N.E.C.

In the 1987 Census of Manufactures, Industry 3996, Hard Surface Floor Coverings, N.E.C., had employment of 7.7 thousand. The employment figure was 45 percent above the 5.3 thousand reported in 1982. Compared with 1986, employment in 1987 increased 10 percent. The 1986 data are based on the Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses.

[1] **Standard Industrial Classification Manual: 1987.** For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Stock No. 041-001-00314-2.

Address inquiries to Bureau of the Census, Industry Division, Washington, DC 20233, or call **Ric Williamson** (301) 763-7304.

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The total value of shipments for establishments classified in this industry was $1.3 billion.

The cost of materials and services used by establishments in this industry amounted to $560.5 million in 1987. Data on specific materials consumed appear in table 3.

INDUSTRY 3999, MANUFACTURING INDUSTRIES, N.E.C.

In the 1987 Census of Manufactures, Industry 3999, Manufacturing Industries, N.E.C., had employment of 65.7 thousand. The employment figure was 3 percent above the 64.0 thousand reported in 1982. Compared with 1986, employment in 1987 increased 20 percent. The 1986 data are based on the Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses.

The total value of shipments for establishments classified in this industry was $4.6 billion.

The cost of materials and services used by establishments in this industry amounted to $1.9 billion in 1987. Data on specific materials consumed appear in table 3.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used in the tables in this publication:

-	Represents zero.
(D)	Withheld to avoid disclosing data for individual companies; data are included in higher level totals.
(NA)	Not available.
(NC)	Not comparable.
(S)	Withheld because estimate did not meet publication standards on the basis of either the response rate or a consistency review.
(X)	Not applicable.
(Z)	Less than half the unit shown.
do	Ditto.
n.e.c.	Not elsewhere classified.
n.s.k.	Not specified by kind.
pt.	Part.
r	Revised.
SIC	Standard Industrial Classification.

Other abbreviations, such as lb, gal, yd, doz, bbl, and s tons, are used in the customary sense.

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Nondurables	Thomas Flood	(301) 763-5911
Import/Export Publications	Foreign Trade Division	(301) 763-5140
Industry Analysis and Forecasts	International Trade Administration	(202) 377-4356

Table 1. Historical Statistics for the Industry: 1987 and Earlier Years

[Excludes data for auxiliaries. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix.]

Year[1]	Companies[2] (no.)	All establishments[3] Total (no.)	All establishments[3] With 20 employees or more (no.)	All employees Number (1,000)	All employees Payroll (million dollars)	Production workers Number (1,000)	Production workers Hours (millions)	Production workers Wages (million dollars)	Value added by manufacture[5] (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expenditures (million dollars)	End-of-year inventories[4] (million dollars)	Ratios Specialization (percent)	Ratios Coverage (percent)
INDUSTRY 3991, BROOMS AND BRUSHES															
1987 Census	(NA)	295	141	12.1	226.3	9.1	17.3	134.9	541.6	434.3	974.7	26.3	176.9	(NA)	(NA)
1986 ASM	(NA)	(NA)	(NA)	11.4	202.3	8.7	16.9	118.9	479.3	386.2	859.3	[5]27.6	166.8	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	11.4	190.3	8.6	16.3	111.9	438.9	369.7	808.0	[5]26.1	154.4	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	13.2	202.6	9.9	18.0	121.4	482.4	402.9	878.2	17.7	172.7	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	13.4	205.1	9.9	17.6	124.1	470.9	421.1	894.0	[5]18.7	159.2	(NA)	(NA)
1982 Census	320	341	139	14.1	197.1	10.5	19.4	123.0	432.5	376.9	818.1	17.2	155.1	90	89
1981 ASM	(NA)	(NA)	(NA)	15.0	195.1	11.4	21.4	122.1	431.1	363.7	788.3	21.1	156.1	(NA)	(NA)
1980 ASM	(NA)	(NA)	(NA)	15.8	189.7	12.1	23.2	118.5	406.4	357.2	762.4	28.9	149.8	(NA)	(NA)
1979 ASM	(NA)	(NA)	(NA)	16.6	179.4	12.6	24.3	113.1	397.7	353.1	742.3	22.2	147.6	(NA)	(NA)
1978 ASM	(NA)	(NA)	(NA)	16.8	174.2	12.9	24.2	109.4	376.2	339.8	716.8	13.5	138.4	(NA)	(NA)
1977 Census	391	409	153	16.5	163.8	12.7	24.0	101.1	353.6	326.7	673.1	15.7	129.9	91	89
1976 ASM	(NA)	(NA)	(NA)	15.6	138.9	11.8	21.8	86.8	303.1	257.0	563.6	12.9	110.1	(NA)	(NA)
1975 ASM	(NA)	(NA)	(NA)	14.7	122.3	11.2	21.4	77.5	273.3	227.3	500.0	20.1	116.8	(NA)	(NA)
1974 ASM	(NA)	(NA)	(NA)	16.9	129.9	13.1	24.0	84.7	278.1	253.2	521.2	12.9	130.0	(NA)	(NA)
1973 ASM	(NA)	(NA)	(NA)	18.1	127.2	14.7	27.7	85.2	276.9	227.3	488.9	19.0	115.6	(NA)	(NA)
1972 Census	430	450	166	17.5	118.5	14.2	26.8	79.5	235.5	204.9	438.3	13.0	98.5	92	94
INDUSTRY 3993, SIGNS AND ADVERTISING SPECIALTIES															
1987 Census	(NA)	3 700	815	65.2	1 342.1	43.6	83.8	722.2	2 462.4	1 757.8	4 214.6	93.6	468.4	(NA)	(NA)
1986 ASM	(NA)	(NA)	(NA)	53.7	1 144.2	36.7	74.3	634.6	2 143.3	1 431.2	3 557.5	[5]75.2	388.0	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	54.6	1 099.9	38.5	74.6	626.3	2 129.9	1 425.1	3 533.2	[5]98.3	358.7	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	54.6	1 013.2	38.9	73.3	576.1	2 049.1	1 380.8	3 418.1	[5]68.1	318.1	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	52.7	881.7	38.4	69.1	503.2	1 610.1	1 171.6	2 759.3	[5]54.7	341.6	(NA)	(NA)
1982 Census	3 155	3 243	862	52.8	870.7	36.4	66.4	497.3	1 583.9	1 113.1	2 692.4	63.1	310.0	97	96
1981 ASM	(NA)	(NA)	(NA)	56.4	861.3	39.3	72.6	505.0	1 578.8	1 025.8	2 595.3	54.8	292.1	(NA)	(NA)
1980 ASM	(NA)	(NA)	(NA)	57.9	803.9	41.9	77.1	478.2	1 464.8	999.9	2 457.6	67.1	301.2	(NA)	(NA)
1979 ASM	(NA)	(NA)	(NA)	58.2	732.7	43.1	81.3	430.8	1 406.4	913.0	2 292.1	63.1	288.5	(NA)	(NA)
1978 ASM	(NA)	(NA)	(NA)	49.2	579.5	36.1	67.4	333.1	1 111.3	718.2	1 817.8	53.1	232.9	(NA)	(NA)
1977 Census	3 373	3 468	627	49.7	566.6	36.8	69.2	343.1	1 060.9	689.2	1 738.7	43.0	210.8	98	97
1976 ASM	(NA)	(NA)	(NA)	40.9	449.6	31.0	59.0	281.2	790.6	507.6	1 295.8	61.7	141.1	(NA)	(NA)
1975 ASM	(NA)	(NA)	(NA)	40.7	417.4	30.7	57.5	263.1	736.0	471.6	1 212.8	19.7	129.0	(NA)	(NA)
1974 ASM	(NA)	(NA)	(NA)	42.9	412.0	32.3	62.4	263.9	842.6	468.2	1 310.1	25.3	145.3	(NA)	(NA)
1973 ASM	(NA)	(NA)	(NA)	49.6	445.4	36.6	68.6	279.1	872.8	395.8	1 264.4	25.0	140.7	(NA)	(NA)
1972 Census	3 221	3 287	637	49.8	415.9	37.5	68.3	261.6	747.7	460.2	1 198.1	30.6	129.5	98	97
INDUSTRY 3995, BURIAL CASKETS															
1987 Census	(NA)	227	80	8.7	162.5	6.8	13.7	112.2	471.7	360.1	837.8	28.8	92.2	(NA)	(NA)
1986 ASM	(NA)	(NA)	(NA)	8.4	155.0	6.6	13.2	105.0	403.9	338.5	738.3	29.7	96.5	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	8.7	151.0	6.9	13.2	103.9	397.0	329.3	727.3	28.5	85.3	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	9.0	147.4	6.9	13.6	97.4	373.5	332.6	704.9	27.2	87.7	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	10.3	151.2	8.3	17.0	106.0	408.3	275.1	689.7	14.3	95.4	(NA)	(NA)
1982 Census	270	301	110	10.3	145.1	8.1	15.3	98.0	374.6	309.7	682.1	36.7	103.4	100	99
1981 ASM	(NA)	(NA)	(NA)	10.6	149.6	8.2	16.5	95.4	342.8	330.7	674.0	25.5	115.6	(NA)	(NA)
1980 ASM	(NA)	(NA)	(NA)	12.4	161.1	9.5	19.4	100.0	328.8	341.4	667.4	16.1	101.5	(NA)	(NA)
1979 ASM	(NA)	(NA)	(NA)	11.4	135.8	8.8	17.5	83.7	292.0	276.4	571.5	10.4	94.0	(NA)	(NA)
1978 ASM	(NA)	(NA)	(NA)	11.9	142.4	9.1	18.8	90.2	287.8	257.1	540.8	15.5	90.4	(NA)	(NA)
1977 Census	376	406	133	12.0	129.7	9.3	17.8	79.7	264.2	244.1	505.9	16.3	81.8	99	98
1976 ASM	(NA)	(NA)	(NA)	12.2	121.4	9.5	17.7	72.9	244.0	215.8	458.6	11.6	80.7	(NA)	(NA)
1975 ASM	(NA)	(NA)	(NA)	12.9	119.2	10.1	18.6	72.9	239.6	212.7	453.0	7.3	78.2	(NA)	(NA)
1974 ASM	(NA)	(NA)	(NA)	14.5	123.2	11.5	21.8	77.8	223.6	226.8	449.6	10.5	89.1	(NA)	(NA)
1973 ASM	(NA)	(NA)	(NA)	14.0	111.1	11.3	22.0	72.5	214.7	204.4	415.5	10.9	65.2	(NA)	(NA)
1972 Census	474	515	189	14.8	109.3	11.8	22.6	72.0	210.3	183.7	391.9	8.8	57.9	99	99
INDUSTRY 3996, HARD SURFACE FLOOR COVERINGS, N.E.C.															
1987 Census	(NA)	21	17	7.7	225.6	6.0	12.6	165.1	740.1	560.5	1 309.7	49.7	182.2	(NA)	(NA)
1986 ASM	(NA)	(NA)	(NA)	7.0	197.1	5.5	11.3	145.3	693.4	461.9	1 155.4	52.4	168.1	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	6.2	165.8	4.8	9.4	121.8	573.7	436.0	1 025.7	37.7	155.3	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	6.6	165.9	5.2	10.1	122.6	579.6	440.3	1 010.2	54.3	176.4	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	6.2	145.7	4.8	9.3	104.3	475.0	403.3	864.7	26.6	164.6	(NA)	(NA)
1982 Census	12	17	10	5.3	112.1	3.9	7.3	78.3	323.4	270.3	604.1	18.2	118.1	94	95-100
1981 ASM	(NA)	(NA)	(NA)	5.5	107.9	4.2	8.0	76.7	331.8	317.3	640.1	12.4	100.7	(NA)	(NA)
1980 ASM	(NA)	(NA)	(NA)	5.7	100.9	4.3	8.3	71.4	326.4	300.4	631.2	18.2	91.2	(NA)	(NA)
1979 ASM	(NA)	(NA)	(NA)	6.4	109.6	4.9	10.0	79.9	368.1	354.2	713.8	27.9	102.0	(NA)	(NA)
1978 ASM	(NA)	(NA)	(NA)	6.5	101.0	5.0	10.1	72.6	361.5	307.5	670.8	21.1	85.8	(NA)	(NA)
1977 Census	20	21	13	6.4	93.5	5.0	10.4	68.6	321.3	291.9	607.2	16.9	84.9	92	98
1976 ASM	(NA)	(NA)	(NA)	5.8	75.4	4.4	9.3	53.9	270.1	244.6	504.8	24.6	89.8	(NA)	(NA)
1975 ASM	(NA)	(NA)	(NA)	5.4	63.1	3.9	8.2	44.2	220.6	202.5	427.0	7.3	63.0	(NA)	(NA)
1974 ASM	(NA)	(NA)	(NA)	5.1	57.9	4.0	8.4	43.5	171.3	196.9	361.2	18.3	62.4	(NA)	(NA)
1973 ASM	(NA)	(NA)	(NA)	5.3	57.9	4.1	8.8	43.8	214.7	137.7	352.9	20.0	50.0	(NA)	(NA)
1972 Census	18	20	11	5.8	59.4	4.6	9.7	44.7	212.0	135.2	342.3	14.0	49.7	88	99
INDUSTRY 3999, MANUFACTURING INDUSTRIES, N.E.C.[6]															
1987 Census	(NA)	3 785	706	65.7	1 151.1	48.6	91.3	658.7	2 690.0	1 944.4	4 642.1	93.2	752.6	(NA)	(NA)
1986 ASM	(NA)	(NA)	(NA)	54.7	905.3	40.4	75.0	529.5	1 991.9	1 485.5	3 488.0	72.4	629.9	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	53.5	878.6	34.1	71.3	499.1	1 870.2	1 451.9	3 345.1	84.1	587.9	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	58.2	913.5	43.3	80.1	521.1	2 048.8	1 631.4	3 663.3	87.1	709.3	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	62.6	943.8	46.3	86.0	546.2	1 968.7	1 925.5	3 952.8	70.4	747.8	(NA)	(NA)
1982 Census	3 842	3 898	637	64.0	944.0	46.8	85.8	548.7	2 157.0	2 173.8	4 322.9	93.2	747.3	(NA)	(NA)
1981 ASM	(NA)	(NA)	(NA)	66.0	880.5	49.4	91.8	518.0	2 073.8	1 939.7	3 980.1	137.3	611.2	(NA)	(NA)
1980 ASM	(NA)	(NA)	(NA)	69.0	833.6	52.1	94.4	498.7	1 863.9	1 780.0	3 643.0	85.6	594.7	(NA)	(NA)
1979 ASM	(NA)	(NA)	(NA)	70.2	732.0	54.0	102.5	456.5	1 696.7	1 567.3	3 229.7	81.4	554.6	(NA)	(NA)
1978 ASM	(NA)	(NA)	(NA)	77.6	778.0	59.4	105.3	484.0	1 706.1	1 544.0	3 218.4	86.4	549.8	(NA)	(NA)

See footnotes at end of table.

Table 1. Historical Statistics for the Industry: 1987 and Earlier Years—Con.

[Excludes data for auxiliaries. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix.]

Year[1]	Companies[2] (no.)	All establishments[3]		All employees		Production workers			Value added by manufacture[4] (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expenditures (million dollars)	End-of-year inventories[4] (million dollars)	Ratios	
		Total (no.)	With 20 employees or more (no.)	Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)						Specialization (percent)	Coverage (percent)
	INDUSTRY 3999, MANUFACTURING INDUSTRIES, N.E.C.[6]—Con.														
1977 Census	4 144	4 208	680	71.7	702.3	55.7	98.7	430.3	1 566.8	1 285.2	2 818.3	84.0	507.6	(NA)	(NA)
1976 ASM	(NA)	(NA)	(NA)	58.8	583.3	45.5	88.2	365.4	1 295.2	1 108.7	2 409.6	94.8	456.1	(NA)	(NA)
1975 ASM	(NA)	(NA)	(NA)	60.5	547.0	45.4	91.0	332.8	1 155.1	995.6	2 169.1	42.8	423.4	(NA)	(NA)
1974 ASM	(NA)	(NA)	(NA)	67.7	495.7	49.5	95.1	322.9	1 081.6	856.5	1 926.4	63.8	435.8	(NA)	(NA)
1973 ASM	(NA)	(NA)	(NA)	70.4	494.6	56.1	102.5	324.8	989.9	754.4	1 741.8	37.3	326.3	(NA)	(NA)
1972 Census	3 570	3 630	667	69.9	457.2	55.6	101.8	298.1	954.7	703.8	1 643.4	43.5	282.3	(NA)	(NA)

Note: Establishments of single unit companies with up to 20 employees (cutoff varied by industry) were excluded from the mail portion of the census. Data for these establishments (and a small number of larger establishments whose reports were not received at the time the data were tabulated) were estimated based on administrative-record information from other agencies in conjunction with industry averages. These establishments accounted for the following percent of total value of shipments: SIC 3991, 7%; SIC 3993, 22%; SIC 3995, 9%; SIC 3996, 1%; and SIC 3999, 24%.

[1]In annual survey of manufactures (ASM) years, data are estimates based on a representative sample of establishments canvassed annually and may differ from results of a complete canvass of all establishments. ASM publication shows percentage standard errors. Unless otherwise noted, for data prior to 1972, see 1972 Census of Manufactures, vol. I, table 1a of the Industry chapter.

[2]For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

[3]Includes establishments with payroll at any time during year.

[4]Beginning with the 1982 Census of Manufactures, all respondents were requested to report their inventories at (the lower of) cost or market prior to adjustment to LIFO cost. This is a change from prior Censuses and annual surveys of manufactures in which respondents were permitted to value their inventories using any generally accepted accounting method. Consequently, inventories and value added by manufacture are not comparable to prior-year data.

[5]Estimates for new capital expenditures have associated standard error of 15 percent or more and may be of limited reliability. Estimates for other data items are of acceptable reliability.

[6]Industry definition is new for 1987 Census of Manufactures. An explanation of the Standard Industrial Classification revision will apperar in the final industry series text that supercedes this report.

Table 2. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendix. For meaning of abbreviations and symbols, see introductory text.]

1987 product code	Product	1987			1982		
		Number of companies with shipments of $100,000 or more	Product shipments[1]		Number of companies with shipments of $100,000 or more	Product shipments[1]	
			Quantity[2]	Value (million dollars)		Quantity[2]	Value (million dollars)
3991- —	**BROOMS AND BRUSHES**						
	Total	**(NA)**	**(X)**	**842.0**	**(NA)**	**(X)**	**783.7**
39911 —	Brooms	(NA)	(X)	116.7	(NA)	(X)	134.2
39911 13	Household floor brooms, 1,000 doz	(NA)	(S)	78.3	58	(S)	96.3
39911 98	Other brooms (industrial brooms, whiskbrooms, toy brooms, hearth brooms, streetsweeping machine brooms, street brooms, stable brooms, etc.)	(NA)	(X)	38.4	44	(X)	37.9
39911 00	Brooms, n.s.k.	(NA)	(X)	–	(NA)	(X)	–
39912 —	Paint and varnish brushes, rollers, and pads	(NA)	(X)	236.2	(NA)	(X)	223.0
	Whitewash, kalsomine, paperhanging, marking, and stenciling brushes:						
39912 11	Made of pure bristle, 1,000 doz	(NA)	2 642.9	40.7	26	(S)	46.1
39912 33	Made of synthetic bristle and other materials, including mixtures, do	(NA)	(S)	106.7	31	(S)	86.6
39912 43	Paint pads and holders	(NA)	(X)	8.0	5	(X)	1.3
39912 61	Paint rollers, complete units, 1,000 doz	(NA)	*1 239.8	27.4	18	**1 849.5	33.3
39912 83	Roller frames, do	(NA)	*522.9	6.1	12	*1 060.2	11.8
39912 85	Replacement rollers, do	(NA)	*4 403.2	45.2	19	*6 316.3	44.0
39912 00	Paint and varnish brushes, rollers, and pads, n.s.k.	(NA)	(X)	2.2	(NA)	(X)	(Z)
39913 —	Other brushes	(NA)	(X)	406.7	(NA)	(X)	372.8
	Personal brushes:						
39913 21	Toothbrushes, 1,000 doz	(NA)	30 983.7	82.7	6	26 636.3	50.2
39913 27	Hairbrushes, do	(NA)					
39913 29	Other, including shaving brushes	(NA)	(X)	45.5	9	(X)	24.3
	Maintenance brushes, including floor, scrub, dusting, window, etc.:						
39913 36	Household (including any twisted-in-wire brushes)	(NA)	(X)	60.5	33	(X)	62.5
39913 38	Industrial (including any twisted-in-wire brushes)	(NA)	(X)	100.6	51	(X)	78.3
39913 43	Industrial brushes, except maintenance, including power-driven rotary, end, cup, jewelers' and dentists' brushes, etc.	(NA)	(X)	72.0	29	(X)	66.0
39913 98	Other brushes, including artists' brushes and hair pencils, except artists' airbrushes	(NA)	(X)	43.1	27	(X)	29.4
39913 00	Other brushes, n.s.k.	(NA)	(X)	2.4	(NA)	(X)	–
39910 —	Brooms and brushes, n.s.k.	(NA)	(X)	82.3	(NA)	(X)	33.7
39910 00	Brooms and brushes, n.s.k., typically for establishments with 5 employees or more (see note)	(NA)	(X)	54.9	(NA)	(X)	15.9
39910 02	Brooms and brushes, n.s.k., typically for establishments with less than 5 employees (see note)	(NA)	(X)	27.5	(NA)	(X)	17.8

See footnotes at end of table.

Table 2. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 product code	Product	1987			1982		
		Number of companies with shipments of $100,000 or more	Product shipments[1]		Number of companies with shipments of $100,000 or more	Product shipments[1]	
			Quantity[2]	Value (million dollars)		Quantity[2]	Value (million dollars)
3993- —	**SIGNS AND ADVERTISING DISPLAYS**						
	Total	**(NA)**	**(X)**	**3 837.6**	**(NA)**	**(X)**	**2 549.3**
39931 —	Electric signs	(NA)	(X)	960.3	(NA)	(X)	683.4
39931 12	Luminous tubing (neon, argon, hydrogen, etc.)	(NA)	(X)	229.7	155	(X)	117.2
39931 13	Fluorescent lamp	(NA)	(X)	389.2	306	(X)	314.4
	Incandescent bulb signs:						
39931 14	Electronic variable message displays	(NA)	(X)	56.8	39	(X)	53.8
39931 15	Other	(NA)	(X)	43.0	35	(X)	42.2
39931 16	All other electric signs (including combinations of luminous fluorescent and incandescent)	(NA)	(X)	218.9	116	(X)	150.7
39931 00	Electric signs, n.s.k.	(NA)	(X)	22.6	(NA)	(X)	5.0
39932 —	Nonelectric signs	(NA)	(X)	1 328.4	(NA)	(X)	1 000.1
	Metal signs:						
39932 12	Screen printed	(NA)	(X)	136.9	95	(X)	89.1
39932 22	Other	(NA)	(X)	134.1	110	(X)	103.8
	Wood signs:						
39932 32	Screen printed	(NA)	(X)	27.7	41	(X)	21.2
39932 42	Other	(NA)	(X)	46.7	56	(X)	34.6
	Other signs:						
	Counters, floor displays, point-of-purchase, and other display materials manufactured in the establishment whether printed or unprinted:						
39932 52	Letterpress	(NA)	(X)	50.6	41	(X)	82.8
39932 62	Screen printed	(NA)	(X)	183.6	109	(X)	200.9
39932 72	Offset (lithographic)	(NA)	(X)	62.2	40	(X)	73.4
39932 76	Unprinted	(NA)	(X)	164.4	91	(X)	190.1
	All other signs, including sign letters:						
39932 78	Screen printed	(NA)	(X)	54.1	41	(X)	71.6
39932 88	Other	(NA)	(X)	356.4	109	(X)	98.8
39932 00	Nonelectric signs, n.s.k.	(NA)	(X)	111.6	(NA)	(X)	34.0
39933 —	Advertising specialties:						
39933 00	Advertising specialties	(NA)	(X)	374.3	(NA)	(X)	268.9
39930 —	Signs and advertising displays, n.s.k.	(NA)	(X)	1 174.6	(NA)	(X)	596.9
39930 00	Signs and advertising displays, n.s.k., typically for establishments with 5 employees or more (see note)	(NA)	(X)	960.9	(NA)	(X)	441.9
39930 02	Signs and advertising displays, n.s.k., typically for establishments with less than 5 employees (see note)	(NA)	(X)	213.7	(NA)	(X)	155.0
3995- —	**BURIAL CASKETS**						
	Total	**(NA)**	**(X)**	**796.3**	**(NA)**	**(X)**	**672.8**
39951 —	Metal caskets and coffins, completely lined and trimmed, adult sizes only	(NA)	(X)	493.9	(NA)	(X)	429.5
39951 13	Steel caskets and coffins (excluding stainless steel) thousands	(NA)	982.1	390.5	91	1 137.3	388.5
39951 15	Other metal caskets and coffins (stainless steel, bronze, copper, etc.) do	(NA)	148.6	99.0	27	(S)	40.6
39951 00	Metal caskets and coffins, n.s.k.	(NA)	(X)	4.4	(NA)	(X)	.4
39952 —	Wood caskets and coffins, completely lined and trimmed, adult sizes only	(NA)	(X)	159.4	(NA)	(X)	115.1
39952 11	Cloth covered, softwood thousands	(NA)	**116.7	14.0	45	*212.1	25.0
39952 52	Hardwood do	(NA)	260.1	143.3	50	199.4	88.8
39952 00	Wood caskets and coffins, n.s.k.	(NA)	(X)	2.1	(NA)	(X)	1.2
39953 —	Other caskets and coffins and metal vaults	(NA)	(X)	75.6	(NA)	(X)	87.7
39953 11	Caskets and coffins other than metal or wood, completely lined and trimmed, including plastics, fiberglass, foam, masonite, cardboard, fiberboard, etc., including all children's sizes, regardless of material thousands	(NA)	(S)	1.8	5	(S)	3.3
	Casket shells, KD and SU, unlined or untrimmed:						
39953 31	Metal thousands	(NA)	(S)	27.7	10	363.3	41.2
39953 58	Other materials, including wood, plastics, fiberglass, foam, masonite, cardboard, fiberboard, etc. do	(NA)	(S)	23.9	11	(S)	26.8
39953 93	Burial vaults (except concrete), burial boxes, and casket-shipping containers and cases	(NA)	(X)	15.4	8	(S)	15.7
39953 00	Other caskets and coffins and metal vaults, n.s.k.	(NA)	(X)	6.8	(NA)	(X)	.6
39950 —	Burial caskets, n.s.k.	(NA)	(X)	67.4	(NA)	(X)	40.5
39950 00	Burial caskets, n.s.k., typically for establishments with 5 employees or more (see note)	(NA)	(X)	45.1	(NA)	(X)	23.3
39950 02	Burial caskets, n.s.k., typically for establishments with less than 5 employees (see note)	(NA)	(X)	22.3	(NA)	(X)	17.2
3996- —	**HARD SURFACE FLOOR COVERINGS**						
	Total	**(NA)**	**(X)**	**1 240.6**	**(NA)**	**(X)**	**535.4**
39960 —	Resilient floor covering:						
39960 11	Sheet vinyl flooring mil sq yd	(NA)					
	Floor tile:						
39960 21	Vinyl tile mil sq yd	(NA)	350.1	1 236.5	3	158.6	529.9
	Vinyl composition tile:						
39960 26	Plain backed mil sq yd	(NA)					
39960 29	Adhesive backed do	(NA)					
39960 98	Other floor covering do	(NA)					
39960 00	Hard surface floor coverings, n.s.k., typically for establishments with 10 employees or more (see note)	(NA)	(X)	3.3	(NA)	(X)	3.1
39960 02	Hard surface floor coverings, n.s.k., typically for establishments with less than 10 employees (see note)	(NA)	(X)	.8	(NA)	(X)	2.4

See footnotes at end of table.

Table 2. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 product code	Product	1987			1982		
		Number of companies with shipments of $100,000 or more	Product shipments[1]		Number of companies with shipments of $100,000 or more	Product shipments[1]	
			Quantity[2]	Value (million dollars)		Quantity[2]	Value (million dollars)
3999- —	**MANUFACTURING INDUSTRIES, N.E.C.**						
	Total	**(NA)**	**(X)**	**4 311.3**	**(NA)**	**(X)**	**4 119.9**
39991 —	Chemical fire-extinguishing equipment and parts	(NA)	(X)	314.2	(NA)	(X)	333.5
	Hand portable extinguishers:						
39991 13	Carbon dioxide — thousands	(NA)	527.3	23.5	5	511.0	22.1
39991 17	Dry chemical fire extinguishers — do	(NA)	(S)	107.5	10	(S)	117.6
39991 18	Pressurized water — do	(NA)	178.8	4.8	5	**273.0	6.6
39991 41	Other hand portable extinguishers, including foam and halogenated agents — do	(NA)	720.8	31.3	9	462.9	15.9
	Fixed systems:						
39991 51	Inert gas	(NA)					
39991 61	Other fixed systems	(NA)					
39991 69	Other chemical fire-extinguishing equipment, including two-wheeled chemical fire engines, but excluding water sprinkler systems	(NA)	(X)	120.6	14	(X)	136.2
39991 71	Parts and attachments for chemical fire-extinguishing equipment	(NA)	(X)	9.0	7	(X)	35.2
39991 00	Chemical fire-extinguishing equipment and parts, n.s.k.	(NA)	(X)	17.7	(NA)	(X)	-
39992 —	Coin-operated amusement machines	(NA)	(X)	325.1	(NA)	(X)	1 086.9
39992 22	Arcade and amusement center type electronic games (for additional detail, see Current Industrial Report MA-36P, Communication Equipment, Including Telephone and Telegraph Equipment)	(NA)	(X)	266.2	24	(X)	927.5
39992 99	Other amusement machines, including nonelectronic arcade games and parts for all arcade games	(NA)	(X)	55.1	14	(S)	158.4
39992 00	Coin-operated amusement machines, n.s.k.	(NA)	(X)	3.8	(NA)	(X)	1.0
39993 —	Matches:						
39993 00	Matches — millions	(NA)	4.5	87.0	(NA)	(S)	97.1
39994 —	Candles:						
39994 00	Candles, including tapers	(NA)	(X)	192.8	(NA)	(X)	257.6
39996 —	Furs, dressed and dyed	(NA)	(X)	66.5	(NA)	(X)	96.7
39996 11	Furs, dressed and dyed	(NA)	(X)	38.1	25	(X)	44.0
39996 93	Receipts for dressing and dyeing furs done in plant on materials owned by others	(NA)	(X)	28.2	15	(X)	52.4
39996 00	Furs, dressed and dyed, n.s.k.	(NA)	(X)	.2	(NA)	(X)	.3
39997 —	Umbrellas, parasols, and canes	(NA)	(X)	49.4	(NA)	(X)	64.9
39997 11	Umbrellas, including parasols	(NA)	(X)	37.2			
39997 51	Canes	(NA)	(X)	-	(NA)	(X)	64.9
39997 00	Umbrellas, parasols, and canes, n.s.k.	(NA)	(X)	12.2			
39998 —	Feathers, plumes, and artificial flowers	(NA)	(X)	319.7	(NA)	(NA)	(NA)
39998 13	Artificial Christmas trees, all types (metal, plastics, etc.) — millions	(NA)	(S)	101.7	16	6.1	73.3
	Artificial flowers, fruits, and wreaths:						
39998 15	Plastics type	(NA)	(X)	19.4	27	(X)	25.3
39998 17	Other materials	(NA)	(X)	73.1	46	(X)	40.7
39998 21	Feathers and plumes	(NA)	(X)	37.0	18	(X)	67.8
39998 00	Feathers, plumes, and artifical flowers, n.s.k.	(NA)	(X)	88.5	(NA)	(NA)	(NA)
39999 —	Miscellaneous fabricated products, n.e.c.	(NA)	(X)	1 355.0	(NA)	(X)	1 028.8
39999 07	Hair clippers, for human use, hand and electric	(NA)	(X)	48.1	3	(X)	20.7
39999 11	Barber and beauty shop furniture and equipment, including barber and beauty chairs	(NA)	(X)	39.5	12	(X)	26.8
39999 13	Beauty and barber shop accessories, including hair curlers, pads, and wraps	(NA)	(X)	37.8	25	(X)	45.8
39999 24	Hair work, switches, toupees, and wigs	(NA)	(X)	8.2	10	(X)	7.5
39999 42	Tobacco pipes — thousands	(NA)	(S)	(3)	6	2 680.7	7.2
39999 44	Cigar and cigarette lighters (except precious metal and electric) — millions	(NA)	(S)	(3)	8	295.5	113.4
39999 51	Christmas tree ornaments and decorations (except glass and electrical) — do	(NA)	(S)	53.9	25	(S)	60.0
39999 61	Lamp shades, excluding plastics, metal, and glass	(NA)	(X)	28.8	(NA)	(X)	41.8
39999 98	Miscellaneous fabricated products, not elsewhere classified	(NA)	(X)	31 060.3	406	(S)	717.5
39999 00	Miscellaneous fabricated products, n.s.k.	(NA)	(X)	78.5	(NA)	(X)	29.9
39990 —	Miscellaneous fabricated products, n.e.c., n.s.k.	(NA)	(X)	1 601.5	(NA)	(X)	905.5
39990 00	Miscellaneous fabricated products, n.e.c., n.s.k., typically for establishments with 5 employees or more (see note)	(NA)	(X)	1 169.1	(NA)	(X)	8e5.4
39990 02	Miscellaneous fabricated products, n.e.c., n.s.k., typically for establishments with less than 5 employees (see note)	(NA)	(X)	432.4	(NA)	(X)	220.1

Note: In 1987 Census of Manufactures, data for establishments of small single unit companies with up to 20 employees were estimated from administrative-record data rather than data actually collected from respondents. Employment cutoffs used for administrative records for each industry and shipments figures are included in code ending with "002". In both 1987 and 1982 Censuses of Manufactures, products not completely identified on standard forms were coded in appropriate product class (five-digit) followed by "00" or to appropriate product group code (four-digit) followed by "000".

[1]Data reported by all producers, not just those with shipments of $100,000 or more.

[2]For some establishments, data have been estimated from central unit values which are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: * 10 to 19 percent estimated; ** 20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by (S).

[3]For 1987, product codes 39999 42 and 39999 44 are included with 39999 98 to avoid disclosing data for individual companies.

Table 3. Materials Consumed by Kind: 1987 and 1982

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. For further explanation, see Cost of Materials in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 material code	Material	1987 Quantity[1]	1987 Delivered cost (million dollars)	1982 Quantity[1]	1982 Delivered cost (million dollars)
	INDUSTRY 3991, BROOMS AND BRUSHES				
	(Material data were not collected for this industry.)				
	INDUSTRY 3993, SIGNS AND ADVERTISING SPECIALTIES				
	Materials, parts, containers, and supplies	(X)	**1 384.7**	(X)	**969.3**
243001	Veneer and plywood	(X)	43.9	(NA)	(NA)
260003	Paper and paperboard products, except paperboard boxes, containers, and corrugated paperboard	(X)	42.6	(X)	27.0
265001	Paperboard boxes and containers	(X)	39.2	(X)	26.7
282104	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc., but excludes, sheets, rods, tubes, and shapes ... mil lb	(S)	28.3	(S)	8.6
308007	Plastics products consumed in the form of sheets, rods, tubes, and other shapes	(X)	143.6	(X)	107.4
285101	Paints, varnishes, lacquers, japans, enamels, and allied products ... 1,000 gal	(S)	38.9	(S)	18.0
289300	Printing ink ... mil lb	(S)	6.3	(NA)	(NA)
331002	Steel mill shapes and forms, except castings and forgings	(X)	61.5	(X)	52.7
335002	Nonferrous metal mill shapes and forms	(X)	90.3	(X)	43.0
342903	Metal hardware, including hinges, handles, locks, casters, etc.	(X)	20.8	(NA)	(NA)
361201	Specialty transformers and flourescent ballasts	(X)	40.4	(X)	26.7
970099	All other materials and components, parts, containers, and supplies consumed	(X)	248.5	(X)	288.8
971000	Materials, parts, containers, and supplies, n.s.k.[2]	(X)	580.4	(X)	370.4
	INDUSTRY 3995, BURIAL CASKETS				
	Materials, parts, containers, and supplies	(X)	**331.8**	(X)	**290.5**
220123	Cotton, wool, manmade fiber fabrics, etc.	(X)	44.5	(X)	40.5
331001	Steel mill shapes and forms, except castings ... 1,000 s tons	(S)	72.2	(S)	73.0
342902	Casket and casket shell hardware, metal	(X)	48.6	(X)	63.1
242101	Rough and dressed lumber ... mil bd ft	(S)	30.9	(S)	23.6
285101	Paints, varnishes, lacquers, shellacs, japans, enamels, and allied products ... 1,000 gal	(S)	15.5	(S)	12.2
970099	All other materials and components, parts, containers, and supplies	(X)	78.7	(X)	52.3
971000	Materials, parts, containers, and supplies, n.s.k.[2]	(X)	41.4	(X)	25.8
	INDUSTRY 3996, HARD SURFACE FLOOR COVERINGS, N.E.C.				
	Materials, parts, containers, and supplies	(X)	**497.6**	(X)	**234.2**
149971	Asbestos, crude (including fiber) ... 1,000 s tons	-	-	(X)	[3]
324101	Portland cement ... do	-	-	(NA)	(NA)
249941	Cork products	(X)	-	-	-
262190	Building paper and board ... mil lb	(X)	[4]	(X)	[3]
280023	Pigment, organic and inorganic	(S)	22.4	(S)	[3]
282104	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc., but excluding sheets, rods, tubes, and shapes ... do	(S)	180.9	(S)	60.4
282202	Synthetic rubber ... do	(S)	[4]	(X)	[3]
083111	Natural rubber ... mil s tons	(S)	[4]	(S)	[3]
306902	Fabricated rubber products, except tires, tubes, hose, belting, and gaskets	(X)	-	-	-
331018	Tin plate, terne plate, and black plate ... 1,000 s tons	-	-	-	-
335002	Nonferrous metal mill shapes and forms ... do	-	-	(NA)	(NA)
349012	Fabricated wire products (including springs and spring wire) ... do	-	-	(NA)	(NA)
970099	All other materials and components, parts, containers, and supplies	(X)	*284.8	(X)	[3]149.6
971000	Materials, parts, containers, and supplies, n.s.k.[2]	(X)	9.4	(X)	24.2
	INDUSTRY 3999, MANUFACTURING INDUSTRIES, N.E.C.				
	Materials, parts, containers, and supplies	(X)	**1 692.9**	(X)	**1 917.3**
	Mill shapes and forms (except castings and forgings):				
331001	Carbon steel ... 1,000 s tons	(S)	44.3	(S)	60.9
331020	Alloy steel ... do	(S)	12.0	(S)	12.7
331031	Stainless steel ... do	(S)	27.4	(S)	33.5
335001	Aluminum and aluminum-base alloy ... mil lb	*35.8	31.4	**86.6	39.9
335105	Copper and copper-base alloy ... do	**11.8	19.1	*6.4	7.1
308007	Plastics products consumed in the form of sheets, rods, tubes, and other shapes	(X)	53.5	(X)	29.1
282104	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc., but excluding sheets, rods, tubes, and shapes ... mil lb	(S)	32.1	(S)	27.3
265001	Paperboard containers, boxes, and corrugated paperboard	(X)	45.7	(X)	84.5
242101	Rough and dressed lumber ... mil bd ft	(S)	25.7	(S)	57.5
970099	All other materials and components, parts, containers, and supplies	(X)	618.2	(X)	950.9
971000	Materials, parts, containers, and supplies, n.s.k.[2]	(X)	783.4	(X)	613.9

[1] For some establishments, data have been estimated from central unit values which are based on quantity-cost relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: * 10 to 19 percent estimated; ** 20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by (S).

[2] Total cost of materials of establishments that did not report detailed materials data, including establishments that were not mailed a form.

[3] For 1982, material codes 149971, 207010, 266111, 280023, 282202, 084913, and 289102 were included with material code 970099 to avoid disclosing data for individual companies.

[4] For 1987, material codes 262190, 282202, and 083111 are included with material code 970099 to avoid disclosing data for individual companies.

APPENDIX
Scope and Coverage and Explanation of Terms

GENERAL

The 1987 Census of Manufactures is the 32nd census of manufacturing establishments conducted in the United States. For 1987, it was conducted as part of the economic censuses, which included the censuses of mineral industries, construction industries, retail and wholesale trades, service industries, selected transportation activities, and minority-owned and women-owned businesses, under authority of title 13 of the United States Code. Title 13 specifies that an economic census be conducted every 5 years to cover years ending in 2 and 7.

SCOPE AND COVERAGE

Establishment Basis of Reporting

The census of manufactures is conducted on an establishment basis. All manufacturing establishments with one paid employee or more at any time during the year are covered by the census of manufactures. Therefore, a company operating at more than one location is required to file a separate report for each location. This report excludes information for separately operated administrative offices, warehouses, garages, and other auxiliary units which service manufacturing establishments of the same company. Where these auxiliary operations are conducted at the same location as the manufacturing operation, they are usually included in the report for the operating manufacturing establishment.

Use of Administrative Records

From a universe of approximately 350,000 manufacturing establishments in the 1987 Census of Manufactures, approximately 150,000 small single-establishment companies were excused from filing reports. Selection of the small establishment nonmail cases was done on an industry-by-industry basis. A variable cutoff was used to determine those establishments for which administrative records were to be used in place of a census report. The cutoffs were selected so the administrative-record cases would account for approximately 3 percent or less of the value of shipments for the industry. These cutoffs were then adjusted so that all single-establishment companies with less than 5 employees were excluded from the mail canvass, while all establishments with more than 20 employees were included. Where establishments in the 5 to 20 employee size range were included in the mail canvass, an abbreviated census form was frequently used.

For these nonmail establishments, (and a small number of larger establishment whose reports were not received at the time the data were tabulated) data on employment, payroll, and receipts were obtained from administrative records of other government agencies rather than from census forms. The administrative-record information was then used in conjunction with industry averages to estimate the data for these establishments. The value of shipments and cost of materials were not distributed among specific products and materials but were included in the product and material "not specified by kind" (n.s.k.) categories.

EXPLANATION OF TERMS

Number of establishments and companies–A separate report was required for each manufacturing establishment (plant) with one employee or more. An establishment is defined as a single physical location where manufacturing is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

All employees–Includes all full-time and part-time employees on the payrolls at any time during the year. Included are all persons on paid sick leave, paid holidays, and paid vacations. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded. The "all employees" number is the average number of production workers plus the number of other employees in mid-March. The number of production workers is the average of those for midmonth payroll periods of March, May, August, and November.

Production workers–Includes workers up through the working-supervisor level engaged in fabricating, processing, assembling, inspecting, receiving, packing, warehousing, shipping (but not delivering), maintenance, repair, janitorial, guard services, product development, auxiliary production for plant's own use (e.g., powerplant), recordkeeping, and other closely associated services. Truckdrivers delivering ready-mixed concrete are also included in production workers.

Other employees–Includes nonproduction personnel, including those engaged in the following activities: supervision above working-supervisor level, sales (including driver/salespersons), sales delivery (truckdrivers and helpers), advertising, credit collection, installation and

servicing of own product, clerical and routine office functions, executive, purchasing, finance, legal, personnel (including cafeteria, etc.), professional, and technical employees.

Payroll–Includes the gross earnings for the "employees" defined above, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' Social Security contributions, withholding taxes, group insurance, union dues, and savings bonds. Respondents were told that in reporting they could follow the definition of payrolls used for calculating the Federal withholding tax.

Production-worker hours–Covers hours worked or paid for at the plant, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave when the employee was not at the plant.

Cost of materials–Refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these materials. It includes the cost of materials or fuels consumed, regardless of whether they were purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.

The important components of this cost item are (a) all raw materials, semifinished goods, parts, containers, scrap, and supplies put into production or used as operating supplies and for repair and maintenance during the year; (b) electric energy purchased; (c) fuels consumed for heat, power, or generating electricity; (d) work done by others on materials or parts furnished by manufacturing establishments (contract work); and (e) products bought and resold in the same condition.

Specific materials consumed (table 3)–In addition to the total cost of materials which every establishment was required to report, information was also collected for most manufacturing industries on the consumption of major materials used in manufacturing. These inquiries were restricted to those materials which were important parts of the cost of production in a particular industry and for which cost information was available from manufacturers' records. Establishments consuming less than a specified amount (usually $10,000) of a specific material were not requested to report consumption of that material separately. Also, the cost of materials for the small establishments for which administrative records were used was estimated as "not specified by kind" (n.s.k.).

Value of shipments and other receipts–Generally refers to received or receivable net selling values, f.o.b. plant (exclusive of freight and taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts such as receipts for contract work performed for others, installation and repair receipts, sale of scrap, and sale of products bought and resold without further processing. Included are all items made by or for the establishment from materials owned by it whether sold, transferred to other plants of the same company, or shipped on consignment. The net selling value of products made in one plant on a contract basis from materials owned by another was reported by the plant providing the materials.

In a few industries, the value of production or value of work completed is used instead of value of shipments. These industries are identified in the introduction and are footnoted in table 1.

In the case of multiunit companies, the manufacturer was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, that is, including not only the direct costs of production but also a reasonable proportion of "all other costs" (including company overhead and profit).

Shipments or production of individual products (table 2)–In the 1987 census, detailed shipment information was collected for approximately 11,000 individual products. These products are identified by a seven-digit code and are grouped into approximately 1,500 classes of products, which in turn are primary to 459 four-digit industries. Data at the five-digit product-class level have been collected each year as part of the annual survey of manufactures. Information at the seven-digit level, collected for many industries in the current industrial reports program, is not included in this table.

Value added by manufacture–This measure of manufacturing activity is derived by subtracting the cost of materials, supplies, containers, fuel, purchased electricity, and contract work from the value of shipments for products manufactured plus receipts for services rendered. The result of this calculation is then adjusted by the addition of value added by merchandising operations (that is, the difference between the sales value and cost of merchandise sold without further manufacturing, processing, or assembly) plus the net change in finished goods and work-in-process inventories between the beginning and end of the year.

For those industries where value of production is collected instead of value of shipments (see footnote in table 1), value added is adjusted only for the change in work-in-process inventories between the beginning and end of the year. For those industries where value of work done is collected, the value added does not include an adjustment for the change in finished goods or work-in-process inventories.

Value added avoids the duplication in the figure for value of shipments which results from the use of products of some establishments as materials by others. Value

added is considered to be the best value measure available for comparing the relative economic importance of manufacturing among industries and geographic areas.

Expenditures for new plant and equipment–Establishments in operation and any known plants under construction were asked to report their expenditures for (a) permanent additions and major alterations to manufacturing establishments and (b) new machinery and equipment used for replacement and additions to plant capacity if they are of the type for which depreciation accounts are ordinarily maintained.

These totals exclude expenditures for used plant and equipment, expenditures for land, and cost of maintenance and repairs charged as current operating expenses. Data for used plant and equipment will be published in the final industry bulletin.

End-of-year inventories–Comprised of (a) finished products; (b) work-in-process; and (c) materials, supplies, fuels, etc. Beginning in 1982, respondents were asked to report their inventories at (the lower of) cost or market prior to adjustment to LIFO cost. This is a change from prior years in which respondents were permitted to value their inventories using any generally accepted accounting method. Therefore, 1982 through 1987 data for inventories are not strictly comparable to prior-year data.

Specialization and coverage ratios–An establishment is classified in a particular industry if its shipments of primary products of the industry exceed in value its shipments of the products of any other single industry. An establishments' shipments include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), and receipts for miscellaneous activities (merchandising, contract work, resales, etc.). The following ratios have been developed to measure the relationship of primary product shipments to the data on shipments for the industry shown in table 1 and data on product shipments shown in table 2.

Specialization ratio–Represents the ratio of primary product shipments to total product shipments (primary and secondary, excluding miscellaneous receipts) for the establishments classified in the industry.

Coverage ratio–Represents the ratio of primary products shipped by the establishments classified in the industry to the total shipments of such products that are shipped by all manufacturing establishments, wherever classified.